

502,426

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 July 2003 (31.07.2003)

PCT

(10) International Publication Number
WO 03/062436 A1

(51) International Patent Classification⁷: **C12P 7/26, 7/24**

(21) International Application Number: **PCT/IL03/00057**

(22) International Filing Date: **23 January 2003 (23.01.2003)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
147823 24 January 2002 (24.01.2002) IL

(71) Applicant (for all designated States except US): **BEN-GURION UNIVERSITY OF THE NEGEV [IL/IL]**; Research and Development Authority, P.O. Box 653, 84105 Beer-Sheva (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHIPMAN, David, M. [IL/IL]**; 6 Tzabar Street, 84965 Omer (IL). **BARAK, Ze'ev [IL/IL]**; 54 Rupin Street, 84105 Beer-Sheva (IL). **ENGEL, Stanislav [IL/IL]**; 13/5 Shazar Street, 84894 Beer-Sheva (IL). **VYAZMENSKY, Maria [IL/IL]**; Shani, Unit 165, 90411 Har Hebron (IL).

(74) Agents: **LUZZATTO, Kfir et al.**; P.O. Box 5352, 84152 Beer-Sheva (IL).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PROCESS FOR PREPARING CHIRAL AROMATIC α -HYDROXY KETONES USING 2-HYDROXY-3-OXOACID SYNTHASE**

(57) Abstract: A biotransformation process for preparing chiral aromatic -hydroxy ketones in high yields is described, using 2-hydroxy-3-oxoacid synthase, such as AHAS or TSAS. Optionally substituted arylaldehydes and -oxoacids react in this process to provide pure enantiomers, useful as synthons in the production of various drugs, an example being (R)-phenylacetyl carbinol.

WO 03/062436 A1